

ATTACHMENT

VERSION WITH MARKINGS  
SHOWING CHANGES MADE TO THE CLAIMS

Claims 15, 19, 23, 27, 30, 33 and 36 are amended as follows:

15.(Seven Times Amended) A digital signal conversion apparatus for converting a first digital image signal to a second digital image signal having a high resolution component, comprising:

a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained on the basis of at least a digital image signal having said high resolution component;

means for receiving said first digital image signal including pixel data representing pixel values;

means for clustering a plurality of pixel data of said first digital image signal adjacent to a pixel data of said second digital image signal to produce a class, a bit number of said pixel data of said first digital image signal being reduced;

means for retrieving said class data from one of said addresses of said memory corresponding to said class of said first digital image signal; and

means for generating all of pixel data, representing pixel values of said second digital image signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data in which a position of at least one of said clustered pixel data is spatially located at the same position of at least one of said generated data.

19. (Seven Times Amended) A digital signal data conversion method for converting a first digital image signal to a second digital image signal having a high resolution component, comprising the steps of:

storing class data for respective classes at addresses in a memory corresponding to said respective classes, said class data obtained on the basis of at least a digital image signal having said high resolution component;

receiving said first digital image signal including pixel data representing pixel values;

clustering a plurality of pixel data of said first digital image signal adjacent to a pixel data of said second digital image signal to produce a class, a bit number of said pixel data of said first digital image signal being reduced;

retrieving said class data from one of said addresses of said memory corresponding to said class of said first digital video signal; and

generating all of pixel data, representing pixel values of said second digital image signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data in which a position of at least one of said clustered pixel data is spatially located at the same position of at least one of said generated data.

23. (Seven Times Amended) A digital signal conversion apparatus for converting a digital video signal admitting of a first standard into a digital video signal admitting of a second standard, a first resolution of said digital video signal admitting of said first standard being lower than a second resolution of said digital video signal admitting of said second standard, comprising:

a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained on the basis of at least a digital video signal admitting of said second standard having said second resolution;

means for receiving an input digital video signal including pixel data and admitting of said first standard;

means for clustering a plurality of pixel data of said input digital video signal adjacent to a pixel data of a digital video signal admitting of said second standard to produce a class, a bit number of said pixel data of said input digital video signal being reduced;

means for retrieving said class data from one of said addresses of said memory corresponding to said class of said input digital video signal admitting of said first standard;

means for generating all of pixel data, representing pixel values of said digital video signal admitting of said second standard, in the same manner in accordance with a common algorithm based upon at least said class data which has been retrieved in which a position of at least one of said clustered pixel data of said digital video signal admitting of said first standard is spatially located at the same position of at least one of said generated data.

27. (Eight Times Amended) A digital signal conversion apparatus for converting a standard definition digital video signal to a high definition digital video signal, comprising:

a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained on the basis of at least a digital video signal having a high resolution component;

means for receiving said standard definition digital video signal having pixel data representing pixel values;

means for clustering a plurality of pixel data of said standard definition digital video signal adjacent to a pixel data of said high definition digital video signal to produce a class, a bit number of said pixel data of said standard definition digital video signal being reduced;

means for retrieving said class data from one of said addresses of said memory corresponding to said class of said standard definition digital video signal; and

means for generating all of pixel data, representing pixel values of said high definition digital video signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data in which a position of at least one of said clustered pixel data of said standard definition digital video signal is spatially located at the same position of at least one of said generated data.

30. (Eight Times Amended) A digital signal conversion method, comprising the steps of:

storing class data for respective classes at addresses in a memory corresponding to said respective classes, said class data obtained on the basis of at least a digital video signal having a high resolution component;

receiving a standard definition digital video signal having pixel data representing pixel values;

clustering a plurality of pixel data of said standard definition digital video signal adjacent to a pixel data of a high definition digital video signal to produce a class, a bit number of said pixel data of said standard definition digital video signal being reduced;

retrieving said stored class data from one of said addresses corresponding to said class of said standard definition digital video signal; and

generating all of pixel data, representing pixel values of said high definition digital video signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data in which a position of at least one of said clustered pixel data of

said standard definition digital video signal is spatially located at the same position of at least one of said generated data.

33. (Seven Times Amended) A digital data conversion apparatus for converting a first digital image signal to a second digital image signal having a high resolution component, comprising:

a memory for storing class data for respective classes at addresses corresponding to said respective classes, said class data obtained on the basis of at least digital image data having said high resolution component;

means for receiving said first digital image signal including pixel data representing pixel values;

means for clustering a plurality of pixel data of said first digital image signal adjacent to a plurality of pixel data of said second digital image signal to produce a class, a bit number of said pixel data of said first digital image signal being reduced and said class being used to retrieve a class data to generate a plurality of pixel data representing pixel values of said second digital image signal;

means for retrieving said class data from addresses of said memory corresponding to said class of said first digital image signal; and

means for generating all of said pixel data, representing pixel values of said second digital image signal, in the same manner in accordance with a common algorithm based upon at least said retrieved class data in which a position of at least one of said clustered pixel data is spatially located at the same position of at least one of said generated data.

36. (Seven Times Amended) A digital data conversion method for converting a first digital image signal to a second digital image signal having a high resolution component, comprising the steps of:

storing class data for respective classes at addresses in a memory corresponding to said respective classes, said class data obtained on the basis of at least digital image data having said high resolution component;

receiving said first digital image signal including pixel data representing pixel values;

clustering a plurality of pixel data of said first digital image signal adjacent to a plurality of pixel data of said second digital image signal to produce a class, a bit number of said pixel data of said first digital image signal being reduced and said class being used to retrieve a class data to generate a plurality of pixel data representing pixel values of said second digital image signal;

retrieving said class data from addresses of said memory corresponding to said class of said first digital image signal; and

generating all of said pixel data, representing pixel values of said second digital image signal, in the same manner in accordance with a common algorithm based upon said retrieved class data in which a position of at least one of said clustered pixel data is spatially located at the same position of at least one of said generated data.